

\* Complete worksheet 9A: The Wandering Point  
using Fathom!

Point	Correlation	Slope( $b_1$ )	Residual	Influential	High Leverage
None (original data)	0.316	0.4	N/A	N/A	N/A
(3,4)	0.316	0.4	0		
(8,6)	0.5	0.4	0		X
(10,7)	0.6157	0.423	small +		X
(3,8)	0.2357	0.4	~3		
(1,7)	-0.05	-0.06	~2	X	
(8,9)	0.73	0.8	~1	X	X
(10,0)	-0.489	-0.37	~ -1	X	X

## Chapter 9:

- High Leverage: - point whose x-value is extreme (outlier in x-var.)  
- pulls the LSR line close to itself  
- residuals **can** be small (because they pull the line close to themselves)  
- **can** change the correlation and/or the slope (doesn't have to though)
- Influential Point: - drastically changes the slope/correlation when removed
- Outliers: - Any data point that stands away from the others  
- has a large residual OR has high leverage  
- **can** change correlation

**Example:**

PAGE 208 in book..... look at the JUST CHECKING

- 1) Large residual, no leverage, not influential
- 2) High Leverage, Small residual, NOT Influential, YES outlier
- 3) High Leverage, Medium residual, YES Influential

\* Complete Worksheet 9B: Altering LSRL